UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Department of Water Resources	)	**Project No. 2100**

RESPONSE OF THE CALIFORNIA DEPARTMENT OF WATER RESOURCES TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

On September 29, 2006, the Federal Energy Regulatory Commission (FERC or Commission) issued the "Notice of Availability of the Draft Environmental Impact Statement for the Oroville Facilities and Intention to Hold Public Meetings." On November 15, 2006, FERC Staff (Staff) notified interested parties of a new deadline of December 19, 2006 for filing comments. Several parties including the Licensee, California Department of Water Resources (DWR), submitted comments on the Draft Environmental Impact Statement (DEIS) for the Oroville Facilities (Project). The purpose of this filing is to respond to selected comments by others which are incorrect or misleading, or which raise questions which DWR believes should be addressed by clarifying or supplementing the record. The purpose of this filing is not to reiterate points DWR has previously made, or to respond to every comment with which DWR disagrees. In addition, DWR supports the Reply Comments filed by the State Water Contractors and Metropolitan Water District of Southern California on February 2, 2007.

I. SOCIOECONOMICS (BUTTE COUNTY)

Butte County and its affiliates filed numerous comments on the DEIS and have continued to pepper the record with various filings and self-serving studies designed and conducted by the County and its consultants without benefit of collaborative review and

input.[1] DWR notes that the County largely recapitulates the same issues and arguments it has raised throughout this proceeding, and which DWR has repeatedly shown to be flawed, irrelevant, and/or without legal or factual basis.[2] Accordingly, these matters require no additional response.

However, Butte County's comments also include new mischaracterizations regarding the roles of the California Department of Parks and Recreation (DPR) and the California Highway Patrol (CHP) in providing law enforcement at the Project, the responsibility for dam security at the Oroville Dam, and Butte County's Fire Department Emergency Response Data. Also, the Harvey Rose Accountancy Assessment of Butte County Methods and Assumptions,[3] which Butte County cites to support the claim its methods and calculations are "reasonable," in fact contains misleading and inaccurate statements which must be corrected.

A. Law Enforcement and Dam Security at the Project

1. Oroville Dam Security

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[1] Response of Butte County, California to the Draft Environmental Impact Statement for the Oroville Facilities Project, Project No. 2100 (filed Dec. 19, 2006); Comments of Butte County on the Draft Environmental Impact Statement for the Oroville Facilities Project, Project No. 2100 (filed Dec. 19, 2006); Comments of FMY Associates, Inc. on the Draft Environmental Impact Statement for Hydropower License, Project No. 2100 (filed Dec. 19, 2006); Regional and Economic Sciences Response to Draft Environmental Impact Statement for Oroville Facilities, Project No. 2100 (filed Dec. 19, 2006); Assessment of Butte County's Methods and Assumptions Used to Determine the Operational Impacts of the Oroville Project Facilities on Butte County, December, 2006, Project No. 2100 (filed Dec. 18, 2006); Comments of Butte County Sheriff, Project No. 2100 (filed Dec. 21, 2006); Butte County District Attorney; Community Action Agency of Butte County Comments in Support of Butte County, Project No. 2100 (filed Dec. 29, 2006); Butte County's Letter re New Information on Dam Security at the Oroville Facilities Project, Project No. 2100 (filed Feb. 1, 2007).

[2] *See, e.g.,* Response of the California Department of Water Resources to Recommendations, Terms and Conditions, Prescriptions, and Settlement Comments, Project No. 2100 (filed May 26, 2006).

[3] Assessment of Butte County's Methods and Assumptions Used to Determine the Operational Impacts of the Oroville Project Facilities on Butte County, December, 2006, Project No. 2100 (filed Dec. 18, 2006); *see also* Technical Corrections to Harvey M. Rose Accountancy Corp.'s filing of "Assessment of Butte County's Methods and Assumptions Used to Determine the Operational Impacts of the Oroville Facilities on Butte County, Project No. 2100 (filed Jan. 10, 2007).

DWR must first register a cautionary note about detailed discussion of dam security in a public forum. While the technical merits of the County's claims are easily refuted, DWR notes that a serious discussion of the topic is more appropriately afforded through other venues identified below. DWR does not intend to adopt the County's imprudent tactic of debating sensitive dam security details in a forum accessible throughout the world. Indeed, that the County would engage in such tactics inspires no confidence that DWR should entrust the County with any responsibilities whatsoever related to Oroville Dam security, let alone that FERC should require DWR to hand over such responsibilities and pay for them.

The Butte County Sheriff raises concerns about the security of Oroville Dam and claims a need for a staff of 12 deputy sheriffs and two sergeants at an annualized cost of $1,565,852.75, and additional start up expenses of approximately $30,000, in order to provide "minimum level security" for the Lake Oroville Operations Center.[4] Despite the Sheriff's assertions, the CHP has the duty and responsibility of providing protection to State property, including Oroville Dam (Cal. Vehicle Code Section 2400(g)). The CHP provides regular patrols of Oroville Dam and the other critical Project facilities. The CHP has an operations center located nearby and has ready access to all State facilities. In addition, under the supervision of the CHP, DWR contracts for private security services to patrol Oroville Dam. The CHP provides more than adequate security protection for Oroville Dam and related facilities.

Butte County's February 1, 2007 filing is also incorrect. Contrary to the County's alleged security lapses at Oroville Dam, DWR actively participates with FERC's Dam

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[4] Comments of Butte County Sheriff at 1, Project No. 2100 (filed Dec. 21, 2006).

Safety Part 12 security inspections and reviews as well as other State emergency and security preparedness provisions. These inspections and reviews have shown current security measures for Oroville Dam to be adequate to assure continued operational security. DWR is in full compliance with all security requirements at Oroville Dam.

Butte County attempts to compare security arrangements at Oroville Dam with the Bureau of Reclamation's (USBR) Folsom Dam, at which USBR apparently has agreed to pay the Sacramento County Sheriff for security services. Security requirements at the two dams are markedly different, however. Folsom Dam is located in the midst of a large urban region with a population of more than 1.5 million. Because of this, the Folsom Dam crest road has historically been a critically important northwest-southeast arterial connecter road. After the 9/11 terrorism event, this road was closed by the USBR due to security concerns. This closure resulted in serious additional traffic congestion and commuting delays for Folsom and other nearby community residents and businesses. In fact, the USBR has just recently reopened the Folsom Dam crest road specifically during commute hours to alleviate this impact. Congress has authorized a new $117 million bridge that will ultimately obviate the need for local traffic to use the dam road.

By contrast, the Oroville Dam crest road is used by the public to access the Spillway Boat Ramp and Day Use facilities. The road terminates at this recreational facility north of the dam and is not a through road to any other location. The Oroville Dam road saw an average of 258 cars per day in 2006 (DWR, 2006 traffic counter data) crossing Oroville Dam primarily to access day use recreational facilities located immediately north of the dam. This compares to 16,000 daily vehicle trips over Folsom Dam (Folsom Dam Raise, Folsom Bridge, Draft EIS/EIR, Volume 1, May 2006, pre-

closure, page 3-7). Also contrary to the County filing, vehicles crossing Oroville Dam to access these recreational facilities do not need a permit. Further, the vehicle depicted in the lower right portion of the photograph included in the County's filing is not parked on the dam, but rather the southern abutment near restroom facilities.

The County's filing also suggests that Folsom Dam is much farther removed from population centers and critical infrastructure than Oroville Dam. While Folsom Dam is approximately 20 miles east of the State Capital building located in downtown Sacramento, the potential inundation area begins immediately downstream of Folsom Dam. This inundation area is populated by over one million people and also contains critically important State installations such as the maximum security Folsom State Prison (one mile), California Independent System Operators offices (four miles), California Franchise Tax Board (10 miles), and California Office of Emergency Services (eight miles) just to name a few. Many local communities and their associated offices and emergency services facilities are located in the potential inundation area immediately downstream, including the cities of Rancho Cordova, Folsom, Citrus Heights, Fair Oaks, Gold River, Carmichael, and Orangevale.

As noted elsewhere in this filing, DWR and its cooperating State agency partners provide significant law enforcement resources at the Oroville Facilities in general, and Oroville Dam in particular, even though this is typically not required of FERC licensees. Collectively, these law enforcement assets applied to the State-owned Project lands provide roughly four times the sworn peace officers per capita that Butte County provides outside of the Oroville FERC project boundary (page 51, May 2006 DWR Response to Comments). By contrast, the federally-owned lands at the USBR's Folsom Dam are

outside of State and local law enforcement jurisdiction without specific arrangements in place. Accordingly, USBR has entered into such arrangements, including a written agreement with DPR to operate the Folsom State Recreation Area (FSRA) park unit. (It should be noted that the FSRA sees about 50 percent greater annual recreation visitor days than Lake Oroville State Recreation Area (LOSRA), thus contributing to security and law enforcement needs at FSRA.) This is also why the USBR formalized an agreement with the Sacramento County Sheriff for what is described as essentially a security guard service at Folsom Dam.

2. Law Enforcement on Project Lands

In addition to Oroville Dam security, law enforcement on Project lands is more than adequate. There is no need for additional County law enforcement resources within the Project boundary or for DWR to pay for them.

As explained by DPR in its letter dated January 22, 2007,[5] DPR, by California statute, is the lead law enforcement agency on state park lands. The LOSRA is located almost entirely within the Project boundary and comprises about 75% of the Project lands. As the lead law enforcement agency for LOSRA, DPR works cooperatively with the CHP, California Department of Fish and Game (DFG), and local law enforcement agencies to provide high quality safety and enforcement services for the visitors to the LOSRA.

Project lands outside of LOSRA also have significant and adequate law enforcement resources through cooperative efforts of the CHP, DPR, and local law enforcement, as well as private security forces provided by DWR. DFG has the lead law

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[5] Letter to FERC from California Department of Parks and Recreation clarifying Department's public safety and enforcement responsibility at the Project, Project No. 2100 (filed Jan. 30, 2007).

enforcement role in protecting and preserving fish and wildlife and their habitat throughout California (Cal. Fish & Game Code Section 1802; Cal. Penal Code Section 830.2(g)). Moreover, DFG game wardens (these are sworn peace officers) enforce wildlife protection statutes on all State lands, but also have authority to enforce all laws of the State, and thus provide an added public safety presence at the Project (Cal. Fish & Game Code Section 856). In the Settlement Agreement, DWR agreed to allocate up to $100,000 annually to DFG for public safety and enforcement overtime within the Oroville Wildlife Area (OWA), and $170,000 annually to assist DFG with its Wildlife Protection activities within the OWA and Project boundary.[6] *See* Settlement at Section B111. Finally, CHP has initiated an enforcement practice of asking to see camping permits in the OWA which has recently aided in reducing crime and discouraging permanent "campers" at the OWA. This CHP effort, along with increased patrols by DFG and, at times, DPR and local law enforcement, have all contributed to reduced crime and increased public safety at the OWA.[7]

Because DPR's boat patrol responsibility does not include the Thermalito Afterbay, which is not within LOSRA, and because CHP does not have boat patrols, DWR has elected to enter into a special payment arrangement with the Butte County Sheriff to patrol the water surface portion of the Afterbay area. However, there is no requirement under state law, and certainly not under any federal law including the

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[6] DWR's understanding is that it is DFG's intent to use the $170,000 to fund two additional game warden positions.

[7] Personal communication from A Atkins, DFG, to M. Anderson, DWR (Feb. 8, 2007).

Federal Power Act, for DWR to subsidize the Sheriff's general law enforcement responsibilities.[8]

B. Fire Department Emergency Response Data

In the comments submitted by the Butte County Office of the Chief Administrative Officer to FERC,[9] Butte County provides data on Butte County Fire Department (BCFD) responses to emergency calls to the Lake Oroville portion of the Project area. The service calls data, which are allocated between calls during the peak and non-peak periods of the year, purportedly support Butte County's contention that use of peak-period visitation data is appropriate for estimating impacts on BCFD. Although the data for 2004-2006 show that the number of peak period calls exceed the number of non-peak period calls, with the ratio ranging from 2.2:1.0 in 2004 to 8.4:1.0 in 2005, these data do not support the County's contention that using peak period visitation is reasonable.

No information is provided on whether these calls are being generated by visitors who are residents of Butte County or visitors who reside outside of the county. Calls generated by Project visitors who are Butte County residents likely do not increase BCFD's service burden because residents would most likely be recreating elsewhere in Butte County if they were not recreating at Lake Oroville. Therefore, the ratio calculated using the service call data does not represent the additional demand for emergency services induced by non-resident visitors to the Project.

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[8] *See* Final Environmental Impact Statement for the Baker River Hydroelectric Project at 3-374, Project No. 2150 (issued Sept. 8, 2006) ("we find that the enforcement of local laws within the project area is not a matter of Commission jurisdiction, but is the responsibility of local law enforcement agencies. Providing funds for agency personnel to perform an agency's duties is not required to fulfill the project's purposes.")

[9] Comments of Paul McIntosh, Chief Administrative Officer, Butte County, California at 32, Project No. 2100 (filed Nov. 29, 2006).

The County's data indicate that the number of BCFD service calls to Lake Oroville is very small compared to the total number of calls within Butte County, which undermines the rationale for higher BCFD staffing and equipment levels during peak periods generated by visitors to Lake Oroville. As the response data provided by the County show, calls to the Lake Oroville portion of the Project area totaled 51 in 2004, including 35 peak-period calls. According to data in the *Butte County Fire Department Review* (July 2005), BCFD responded to 10,368 total incidents countywide in 2004, indicating that calls for service to Lake Oroville for the entire year represented less than 0.5 percent of total calls. These data suggest that it is unlikely that excess staffing and equipment capacity would be needed merely to respond to the very small number of peak-period calls generated by visitation to the Project.

Lastly, although the California Department of Forestry and Fire Protection (CDF), BCFD, and the Oroville Fire-Rescue Department have separate primary responsibilities for providing fire suppression and emergency services in different parts of Butte County, in practice these agencies cooperatively respond to calls within the Project area (including LOSRA) and the Greater Oroville Area based on the South County Interagency Fire Protection Agreement. Under this agreement, primary responsibility for fire protection and emergency service calls in the area is divided among these agencies depending on the location of the incident and the availability of fire units to respond to the call, regardless of primary jurisdictional responsibilities. Additionally, DPR rangers are most often the first responders to emergency services calls in the LOSRA. Therefore, while BCFD may respond to some calls within the Project area, personnel from State agencies, including DPR, CDF, and CHP, respond to calls for service outside of the

Project area, thereby reducing the demand for BCFD services outside of the Project area. Given this, the nominal increase in calls for BCFD services in the Project area during peak periods is likely offset by calls in BCFD's primary service area that are responded to by the multiple State agencies.

C. Harvey Rose Assessment

On December 18, 2006, Butte County filed an "Assessment of Butte County's Methods and Assumptions Used to Determine the Operational Impacts of the Oroville Project Facilities On Butte County, December 2006," which was prepared by the Harvey M. Rose Accountancy Corporation. That document purports to establish the "reasonableness" of Butte County's claims. However, the Assessment is based on inaccurate information. While Butte County recognized some of the Assessment's flaws in the errata it filed on January 10, 2007, this errata goes on to make additional erroneous statements regarding the levels or adequacy of law enforcement provided at the Oroville Facilities by various State agencies. Factual information about the authority and level of law enforcement provided by various State agencies at the Oroville Facilities can be found in the preceding Section A.

One of the fundamental flaws in the Assessment is its claim (at p. 5) that the County's use of the Area of Highest Use (AHU) in identifying Project-related costs for services such as fire stations and road maintenance is reasonable because it allows for identification of County costs and services on a geographic basis, and therefore such costs can be more directly attributed to the Project. However, the AHU as defined by Butte County in its February 2006 Operational Impacts Report includes a large area northeast of Lake Oroville. Based on existing recreation use estimates, the Project

facilities on the northeast side of the Lake support approximately two percent of the total Project annual recreation visitation. Furthermore, and based on recreation survey results, less than 1.5 percent of visitors to all Project recreation facilities reside in the north and east bordering Tehama, Plumas, and Lassen Counties.

DWR has previously pointed out that the County inappropriately uses less than 11 percent of recreation visitation days (peak season weekends only) extrapolated over the entire year to overestimate visitor burdens on the County.[10] It is further clear from the fire emergency call data that the Project itself generates only a small fraction of the public service needs in Butte County. Contrary to the Assessment, it is not reasonable for the County to define the AHU at roughly ten times the Project area, nor does such an overextended concept of the AHU have any quantifiable relationship to public service demands at the Project.

D. Health and Human Services Impacts

In its February 2006 submittal to FERC entitled *Operational Impacts of the Oroville Facilities Project on Butte County*, Butte County argues that the Project has increased the demand for health and human services programs. One of the County's arguments is that construction of the Project drew workers to Butte County to help construct the Project facilities, and that subsequently thousands of people came to the County to take advantage of the houses that were abandoned or sold below cost after Project construction ended. Furthermore, because there were no jobs for these

[10] Butte County's filing of Operational Impacts of the Oroville Facilities Project on Butte County at 62 (Appendix A), Project No. 2100 (filed Feb. 15, 2006); Response of the California Department of Water Resources to Recommendations, Terms and Conditions, Prescriptions, and Settlement Comments at 37, Project No. 2100 (filed May 26, 2006).

individuals, many became dependent, and remain dependent, on the County's health and human services, resulting in adverse fiscal effects on the County.

To support this contention, the *Operational Impacts* report states that after the height of Project construction in 1966 and 1967, the County's population decreased slightly to 100,200 in 1968 and 100,000 in 1969 before starting an upward trend in the 1970's, indicating that many construction workers and their families chose to remain in the area and that vacated construction housing was filled by individuals who became dependent on the County's health and human services. The report goes on to add that unemployment increased sharply after the construction of the Project from 3,750 in 1968 to 6,775 in 1975.

A review of this and additional information, however, fails to support the County's contentions. For example, the fact that the County's population decreased slightly in 1968 and 1969 may indeed reflect an outward migration of workers as construction of the Project neared completion; however, the County provides no evidence that the upward trend in population growth following construction of the Project is primarily related to people moving into homes abandoned or sold following completion of construction. Indeed, Butte County's upward population trend in the 1970s could reflect many other regional and statewide growth factors. Between 1970 and 1975, nine of the Sacramento Valley's ten other counties experienced "upward trends" in their population growth, suggesting that other factors other than those associated with construction of the Oroville Facilities were in play that affected growth in Butte County and elsewhere in the Sacramento Valley.

Additionally, the unemployment trends cited in Butte County's report do not support the contention that the completion of Project construction directly resulted in increased unemployment and human and health services demands in the County. The unemployment data provided by the County's report, which originally came from the California Employment Development Department, show that unemployment in Butte County in 1967, 1968, and 1969—the years during which the Project was being constructed—was 11.0%, 11.5%, and 10.9%, respectively. Subsequently, during the four years that immediately followed construction of the Project, when construction workers may have lost their jobs and when construction housing may have been reoccupied, unemployment in Butte County fell to 8.9% in 1970, rose slightly to 9.3% in 1971, and fell slightly to 8.8% in 1972, before rising to 10.1% in 1973. Thus, unemployment in 1973, four years following construction of the Project, was actually lower than during the latter years of construction, countering Butte County's argument that completion of construction immediately resulted in greater unemployment within the County. Again, other regional, statewide, and national trends affecting employment trends were likely in play.

Income statistics may provide an additional indication of how construction of the Project may have affected Butte County's economy and the demand for health and human services. For example, if construction of the Project had resulted in declining economic activity, accompanied by increased unemployment, this effect should have been reflected in declining per capita income in Butte County relative to statewide income.

To assess this indicator, decennial U.S. Census data on per capita income from 1959 to 1989 for California and Butte County were compiled, and Butte County's percentage of statewide per capita income at each ten-year interval was calculated, as summarized in the table below.

Per Capita Income in California and Butte County: 1959, 1969, 1979, and 1989

Year	Per Capita Income in California	Per Capita Income in Butte County	Butte County's Income Rank Among California Counties	Butte County's Percentage of Statewide Per Capita Income
1959	$9,057	$7,185	44th	79%
1969	$11,374	$8,699	51st	76%
1979	$13,898	$11,240	42nd	81%
1989	$16,409	$12,083	44th	74%

Note: Income shown in 1989 CPI-U adjusted dollars.

Source: U. S. Census Bureau, Housing and Household Economic Statistics Division. 2005. *Table C3. Per Capita Income by County: 1959, 1969, 1979, and 1989.* Washington, DC.

As the data in the table show, although Butte County's per capita income has always been below statewide income levels, this condition existed in 1959 prior to construction and operation of the Project and persisted in the years following construction of the project. For example, Butte County ranked 44th in per capita income among California's 58 counties in 1959, ten years prior to completion of Project construction, but improved to a rank of 42nd in the state in 1979, ten years after project construction. Since 1959, per capita income in Butte County has fluctuated relative to statewide levels, with little apparent connection to when Project construction was completed. As shown, per capita income in the County, relative to statewide income, fell slightly from 79% in 1959 to 76% in 1969, the year construction of the Project was completed. By 1979, ten

years after Project construction, the County's per capita income had increased to 81% of statewide income, which suggests, if anything, that completion of Project construction had little effect on the County's relative income levels. Additionally, between 1979 and 1989, the County's per capita income fell back to 74% of statewide income, with this change obviously having no connection to Project construction.

In summary, as with trends in population growth and unemployment rates, trends in income growth do not support Butte County's contention that construction of the Project directly resulted in adverse changes to Butte County's economy and to the related demand for County health and human services programs.

II. MONTEREY AMENDMENTS

Plumas County and Butte County comment that the DEIS does not consider the Monterey Amendments. Plumas County further asserts that the DEIS should consider pre-Monterey Amendment Project operations. The Monterey Amendments were changes in the State Water Project (SWP) water supply contracts to provide for changes in water allocation methods, permanent water transfers, and advance approval for various water management programs to provide more stability and flexibility to the State Water Contractors' operations. The amendments went into effect in 1995 and form the basis for current and projected future SWP allocations. The amendments are accurately modeled in the Existing Conditions, Future No-Action, Proposed Action and Alternative 2 in the PDEA. (Appendix C, page C-16).

In fact, the Monterey Amendments have had little or no significance to Oroville Operations and the amount of cold water available for downstream fisheries needs on the Feather River. The Settlement Agreement Alternative and the FERC Staff Alternative

both contain environmental measures that will appropriately protect and enhance fisheries along the Feather River downstream of the Fish Barrier Dam. DWR's ability to comply with these environmental measures in no way depends on the Monterey Amendments or any other aspects of the water contracts. Moreover, FERC has accurately defined the baseline conditions in the DEIS to the extent it describes current operations and does not need to evaluate pre-1995 operations in the impact analysis.

III. RECONNAISSANCE STUDY

The California State Water Resources Control Board (SWRCB) filed comments on the DEIS suggesting that the potential future facility modifications preliminarily evaluated in the Reconnaissance Study set forth in Settlement Agreement Section B108 are part of the proposed project (i.e., federal action) and should be evaluated.[11] As DWR pointed out previously in its DEIS comments, the potential measures recommended for preliminary analysis in the Reconnaissance Study are not currently proposed, but will be evaluated in detail post-license as measures which might be proposed in the future to provide additional temperature enhancements for fisheries.

As described in Section B108 of the Settlement, the Reconnaisance Study was not intended to determine a preferred alternative or recommend measures for implementation, but rather was intended to preliminarily develop and describe a range of potential future measures for consideration during a detailed feasibility study anticipated to be ordered by FERC in a new license for the Oroville Facilities. Within three years following issuance of a new license based on the Agreement (Article A108.4), a preferred

[11] California State Water Resources Control Board Comments on the Draft Environmental Impact Statement at 5, Project No. 2100 (filed Dec. 19, 2006).

alternative and implementation plan developed in consultation with agencies and supported by detailed analysis would be submitted to FERC for approval.

The specific flow and temperature actions proposed in the Settlement for implementation upon license issuance are outlined in Articles A107.2, A108.1, and A108.2. These include increased minimum flows in the Feather River and operational measures that would target the new temperatures outlined in Table 1 for Robinson Riffle in order to provide colder water in the Feather River for anadromous fish.

The Federal and State fisheries agencies concurred in Section 3.1 of the Agreement that the proposed articles satisfy the statutory and other legal requirements for the protection of resources, and that the agencies' statutory and other legal responsibilities are or can be met through the approval of the agreement without material modification. No doubt these agencies' support for the Settlement Agreement was based in part on DWR's agreement, as the second part of a two-phased approach to temperature enhancements downstream of Oroville Dam, to spend up to $5 million investigating the feasibility of these potential future measures and up to $60 million for constructing facilities modifications or other measures to achieve further temperature enhancements for coldwater fisheries.[12] However, detailed evaluation of the potential future facilities modifications should be left until the feasibility study phase of the program after license issuance as described in the Agreement.

IV. WATER TEMPERATURE FOR AGRICULTURAL DIVERSIONS

The Western Canal Water District, Richvale Irrigation District, Butte Water District, Biggs-West Gridley Water District, and Sutter Extension Water District

[12] Settlement Agreement Section B108(c).

(Districts) filed joint comments concerning the effect of Project operations on water temperature for agricultural diversions. The Districts' conclusion (at p. 7) that "slight temperature drops can have large impacts on rice yields" is not substantiated or supported by the references provided in their DEIS comments. The studies cited do not address the actual impacts of cold water to the Districts but rather focus on developing a functional relationship of water temperature exposure to yield loss at a specific location within a single rice field located near the Thermalito Afterbay where the cold water conditions are the coldest that occur in the district. These studies neither compute the yield loss in the entire field nor calculate or estimate potential yield losses across the Districts or the Feather River Service Area (FRSA).

The studies cited by the Districts demonstrate that cold water temperatures only have an impact on rice yield based on an accumulated exposure and indicate that some amount of exposure to water temperature below 65°F or 59°F can occur with little or no loss of rice yield. Roel et al. (2005)[13] and Mutters et al. (2003).[14] These studies also indicate that incremental duration of exposure or an incremental decrease in water temperatures should result in an incremental loss of yield, which is inconsistent with the Districts' assertions of large yield losses being associated with small reductions in water temperatures. Roel et al. (2005) and Mutters et al. (2003).

The studies used 65° F for the purpose of developing the statistical relationships between exposure and yield loss. They did not identify any specific physiological effects

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[13] Roel, A., R. G. Mutters, J. W. Eckert, and R. E. Plant. 2005. Effect of Low Water Temperature on Rice Yield in California. Agronomy Journal 97:943-948.

[14] Mutters, R. G., J. W. Eckart, A. Roel, and R. E. Plant. 2003. Measuring the Effect of Low Water Temperature on Blanking and Grain Yield in California Rice Production. Proceedings of the third International Temperate Rice Conference, Punta del Este, Uruguay. March 10 - 13, 2003. Instituto Nacional de Investigacion Agropecuatia, Montevideo, Uruguay.

on rice production as a result of exposure to this or any other specific water temperature. Additionally, many different water temperatures both higher and lower than 65°F have been reported as potentially biologically relevant to rice production.[15]

The Districts also assert (at p. 3) that DWR "acknowledged the Project's responsibility for causing the water delivered to the Districts intakes to be colder than would be the case absent the project." DWR has not agreed to or reported that the existence or operations of the Project cause cold water exposure-related yield losses in the FRSA. DWR has agreed to and acknowledged that there is a relationship between cold water exposure and yield losses in rice and that those conditions can occur in the FRSA. The Districts are correct in their representation that the Districts and DWR do not currently agree as to the apportionment of the current conditions that are attributable to the Project or to cold water exposure variables that are outside of the ability of DWR to influence; e.g., weather. Further, there has been no agreement on the potential contribution of those variables that are exclusively within the ability of the growers to control, which dictate cold water exposure conditions; e.g., planting timing, variety selection, diversion volumes, irrigation system engineering (acres serviced per turnout, lack of tailwater recirculation), water depth management, water holding practices, tailwater volume management, and other variables, which have the potential of substantially affecting the severity and magnitude of cold water exposure-related rice yield losses. DWR has no control of the diverted water beyond the Thermalito Afterbay diversions or of the practices of individual farmers. The Districts have not provided any information in any of their submittals that establishes their claim of impacts attributable

[15] *See* DWR Technical Response to Intervention of the Water and Irrigation Districts In Butte County, California at Attachment A, page A5, paragraph 2 and page A7, paragraph 3, Project No. 2100 (filed May 26, 2006).

to the Oroville Facilities or weather conditions, or District operations, or grower cultural practices. Instead, they insinuate that all rice losses are due to cold water delivered by the Oroville Facilities and this is utterly unsubstantiated.

Respectfully submitted,

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DATED: February 8, 2007

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission, I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, DC, this 8th day of February, 2007.

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